ABSTRACT

[0057] Disclosed are methods of congestion control in transmission of data in packets over a network link using a transport layer protocol, and transmission methods and protocol systems to implement such methods. The number of unacknowledged packets in transit is less than or equal to a congestion window value $cwnd_i$ which can be varied according to an additive-increase multiplicative-decrease (AIMD) law having an increase parameter α_i. In embodiments, α_i can be increased during each congestion epoch at a time after the start of a congestion epoch, or based on time since the start of a congestion epoch. In embodiments, a multiplicative decrease parameter β_i can be set based on a characteristic(s) of a data flow(s) carried over the network link. For example, the value of β_i may be set as the value of the round-trip time of data traversing the link or based on the minimum of the mean inter-packet time.